



# UNITED STATES PATENT AND TRADEMARK OFFICE

Aw

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/089,667

07/25/2002

Horst Wagner

10191/2352

8936

26646

7590

02/26/2004

KENYON & KENYON  
ONE BROADWAY  
NEW YORK, NY 10004

EXAMINER

STEVENS, MAURICE E

ART UNIT

PAPER NUMBER

2855

DATE MAILED: 02/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/089,667

Applicant(s)

WAGNER ET AL.

Examiner

Maurice Stevens

Art Unit

2855

AW

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10-23-03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 8-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION*****Claim Rejections - 35 USC § 112***

Claims 15, 19, 23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The torque characteristic map was not described in the specification.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 8-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Machida et al (5996547) in view of Machida (5652380).

In regards to claim 8 and 14, Machida et al disclose a second variable which characterizes an angular position at which the injection quantity is metered (column 6, lines 14-20), a third variable which characterizes a torque supplied by the engine (column 1, lines 52-56 and 66-67), determining on the basis of a fourth variable which characterizes an intent of a driver (column 2, line 8), a fifth variable which characterizes a torque desired by the driver (column 1, lines 52-55 and figure 4{capital {S11}}).

Art Unit: 2855

However, Machida et al do not disclose determining on the basis of a first variable which characterizes an injection quantity but Machida discloses a first variable which characterizes an injection quantity (column 6, lines 39-45).

Since Machida et al and Machida are both in the same field of endeavor, the purpose used in Machida would be relevant in the pertinent art of the Machida et al.

It would have been obvious to one having ordinary skill in the art to modify Machida et al according to the teachings of Machida for the purpose of having a fuel injection quantity that was calculated using the intake air flow rate and the engine rotational speed so that you can calculate torque.

In regards to claim 9, Machida et al disclose the first variable corresponds to an actuation duration of an output stage of a solenoid valve (column 3, lines 17-20).

In regards to claim 10 and 25, Machida et al disclose the angular position is that of a crankshaft (figure 2, {21+22}), and the second variable corresponds to the angular position of the crankshaft at which the injection occurs (column 3, lines 49-59).

In regards to claim 11, Machida et al disclose the fourth variable corresponds to a position of an operating element (column 2, line 8).

In regards to claim 12, Machida et al disclose detecting a fault when the third variable and the fifth variable differ by more than a threshold value (figure 4{S14 to S16}).

In regards to claim 13 and 18, Machida et al disclose the fault monitoring takes place only in certain operating states (figure 4 and column 6, lines 48-56).

Art Unit: 2855

In regards to claim 16, Machida et al disclose where and the fourth variable corresponds to a position of an operating element (column 2, line 8).

In regards to claim 17 and 21, Machida et al disclose detecting a fault when the third variable and the fifth variable differ by more than a threshold value (fig 4, {S14 to S16}).

In regards to claim 20, Machida et al disclose the fourth variable corresponds to a position of an operating element (column 2, line 8).

In regards to claim 22, Machida et al disclose the fault monitoring takes place only in certain operating states (figure 4 and, six lines 48-56).

In regards to claim 24, Machida et al disclose the first variable corresponds to an actuation duration of an output stage of a piezoactuator (column 3 lines 14-20).

### ***Response to Arguments***

Applicant's arguments with respect to claims 8-14 have been considered but are moot in view of the new ground(s) of rejection.

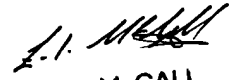
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maurice Stevens whose telephone number is (571) 272-2188 (703) 306-5895. The examiner can normally be reached on M-F, 6:00am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (571) 272-2180 (703) 305-4846. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2855

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

\*\*\*

  
ERIC S. McCALL  
PRIMARY EXAMINER